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## **Are Students' Days Really Balanced? The Importance of Learning in Nature**

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### **Abstract**

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This paper and accompanying film, which were presented at the First Global Conference on Holistic Early Learning and Development, share findings from research conducted at an outdoor early childcare center in Ontario, Canada. I am an independent educator and parent interested in education in nature. My daughter was enrolled at an early childcare center with a focus on outdoor education and environmental awareness and sustainability. At age 3 she enrolled in a forest school program that amplified her ecological and experiential education. In this article, I first discuss background information about myself and my interest in learning in nature. Next, I review some literature that explores whole-child learning and development through a connection with nature. Then my research study and related findings are discussed. In closing, I introduce and explain the hyperlinked film that accompanies the aforementioned research findings.

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Our education system is in a constant state of evolution. Seeing as the human race is also forever evolving, especially with regard to technological advances and related economic demands, it makes sense that the system with which we educate our future members of society be evolving just the same. Some argue, however, that the education system, currently and historically, serves a singular part of each child: the mind. While aiming to sculpt the minds of youths to aid in their amalgamation with society, schooling seems to disconnect students' brains from the rest of their bodies. As a result, youth are not given sufficient opportunity to develop their creativity, cooperation, conflict resolution, or outside-the-box thinking skills. More emphasis is put on literacy and numeracy learned through texts and time spent confined indoors.

Having worked in various classrooms in the Ontario public school system from Kindergarten to Grade 6, I have seen the administration of the balanced school day format. Students are not afforded sufficient time outdoors, as the pressures to perform in literacy and numeracy escalate as students get into the higher grades. It is no secret that babies and toddlers learn as they discover through their senses and natural inquiry skills. As toddlers, without time spent exploring in nature, children would be limited in their understanding of the world around them. Seeing this importance, why is it that learning through outdoor exploration and discovery is not supported for children of all ages in our public school system?

I am an independent educator and parent who has always appreciated nature and being connected with the outdoors. As a parent, the amount of time spent outdoors with my child surmounts the time spent indoors, and it has been this way since her birth. I have seen my daughter discover not only the world around her, but herself as well, through interacting with and exploring in nature. My daughter was enrolled at an early childcare center with a focus on outdoor education and environmental awareness and sustainability. At age 3 she enrolled in a forest school program that amplified her ecological and experiential education.

In this article, I review some literature that explores whole-child learning and development through a connection with nature. Mainella, Agate and Clark (2011) explored the notions of “play deprivation” and “Nature Deficit Disorder” and suggested ways in which outdoor-based play yields positive physical and mental health growth, as well as cognitive and socio-emotional development. Wirth and Rosenow (2012) offered ways in which outdoor play can be incorporated in preschools and early childhood development centers, supporting research by Mainella et al. (2011). Following the review of these articles, my research study of my daughter's forest school program and related findings are discussed. In closing, I introduce and explain the hyperlinked film that accompanies the aforementioned research findings. Together, this paper and film highlight the positive impacts for children spending both structured and unstructured time outdoors – an essential factor missing or restricted in our current public school system.

### Literature Review

Research by Mainella et al. (2011) explored the connection between positive youth development and time spent playing in nature. The researchers built on the work of child development specialist Joe Frost, who maintained that historically, the most famous educational philosophers and educators have believed that play is fundamental “to the development of a full childhood and a happy, well-developed person” (Mainella et al., 2011, p. 89). The *Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth* (2014) illustrated the connection between age and physical activity level. A drastic reduction in physical activity was observed as

84% of 3- to 4-year-old Canadian children met the daily recommendation of physical activity, 7% of 5- to 11-year-olds satisfied the recommended amount, while a mere 4% of 12- to 17-year olds met the daily recommendation. Mainella et al. (2011) suggested that a lack of physical activity is due to Nature Deficit Disorder (NDD), “a disconnection with the environment that stems from the current generation’s tendency to focus on built and engineered entertainment rather than the natural world” (pp. 90-91). Children are choosing artificial forms of play and interaction – virtual challenges – rather than those encountered through outdoor play. Mainella et al. (2011) suggested this is due to a lack of time spent in nature from an early age, including the disappearance [or reduction] of recess in public schools, resulting in a lack of confidence and interest in engaging in unstructured outdoor activities.

Obvious physical benefits of outdoor play include physical fitness and health-related gains. With regard to mental health benefits, a connection exists between a lack of unstructured play and the frequency of emotional disorders like anxiety, depression and attention issues (Mainella et al., 2011). Mainella et al. (2011) highlighted research findings suggesting that, “the more exposure a child has to natural environments, the more manageable the symptoms of ADHD are” (p. 95). Cognitive development is also enhanced through outdoor play as children “explore their creativity, [and] develop their imaginations and dexterity” (Mainella et al., 2011, p. 95). The authors also referred to research findings illustrating the connection between outdoor play and advancements in children’s vocabulary, attention span, concentration, impulse control, curiosity, problem solving strategies, cooperation, empathy and group participation (Mainella et al., 2011). Socio-emotional development, or advancements in children’s emotional and social skills, is also fostered through children’s play. “Children at play practice sharing, turn taking, self-restraint, group work, and simply getting along” (Mainella et al., 2011, p. 96), leading to the development of emotional understanding of themselves and also of the children they are interacting with.

Wirth and Rosenow (2012) summarized the life-enhancing skills children can develop when participating in nature-filled outdoor classrooms. By encouraging play in nature, children learn through inquiry and communication, supporting the holistic development of each child. Wirth and Rosenow (2012) discussed the connection between indoor learning activities and outdoor learning experiences as not only a balance in learning environments, but also in terms of supportive, experiential learning. Learning in nature supplements the curriculum taught indoors, while giving children hands-on experiences, rather than simulated, virtual versions of the world around them. The authors suggested that, “outdoor play enables children’s natural curiosities and develops essential attitudes toward learning” (p. 45). By making learning real and relevant, children develop early on an intrinsic value of learning.

### **Conducting the Research**

An early childcare center in Ontario, Canada runs a forest school program for children aged 3 to 6. Three days a week the group walks to a nearby forest and spends close to 3 hours exploring different parts of the forest. In proposing my research investigation, I developed permission forms for the parent(s) of each student outlining the purpose of my study and asking permission to use photographs, videos, and interviews gathered during my study for purposes of this article and the accompanying film, which were presented at the First Global Conference on Holistic Early Learning and Development. Every parent agreed to full permissions while indicating a unanimous support and belief in the benefits of this program. Over the course of 5 months, I observed and photographed a group of students in the forest school program. I also gathered

data discussed in this paper through one-on-one interviews with students, video footage of discoveries and explorations in the forest and outdoor classroom, as well as follow-up discussions with the program coordinators of the childcare center.

### Findings

When I started observing the children in the forest school program, they were well into an inquiry about knots. I observed children tying knots in ropes to create human-sized “spider webs” between trees, bouncy balance beams, pulleys for lifting heavy branches off the ground, and giant loops used as swings. Being the parent of a student in this program, that first evening over dinner I asked my daughter (age 3) why knowing how to knot a rope was useful. To my astonishment she replied, “Because knots are very strong, Mommy, if you tie them properly.” Naturally, I inquired further about what she meant by “properly,” to which she responded with a demonstration on my sweatshirt strings showing two ways to tie a knot: one way that resulted in one string easily being pulled free, and another way resulting in a much stronger knot. This demonstration led to a discussion about when and where we might see these strong knots in the world around us, and what other structures in nature provide the same sort of strength and dependability.



Figure 1. Child exhibiting use of ropes and knots

This is but one of the real life skills I observed the children engaging in over the 5 months I spent with them. The children explored different ways of creating a shelter outdoors using burlap, canvas, sticks, branches and rocks (Fig. 2).



Figure 2. Children experimenting with different materials to make shelters in the forest

With minimal support from the program coordinators, the children discovered which materials make a shelter stronger, how to create a shelter that keeps falling leaves and snow out, and which materials let more light in. Discussions both outdoors and back in the classroom led to deeper understandings of different types of shelters made in the wild, how and why different animals construct their shelters, and how these shelters serve different purposes.

Through free play and exploration, the children discovered the use of a thicker stick as a tool to hammer a thinner stick into the earth. Teachers helped students by holding the stick that was being hammered into the ground; however, one student figured out a way to accomplish the goal without teacher assistance: she held the stick being hammered into the ground between her feet. She was given the opportunity at the end of the session during their knowledge circle to share this method and teach her classmates her technique (Fig. 3). By consolidating each forest session with a knowledge circle, students not only got a chance to share something unique they learned, but also to learn through their peers. This builds confidence in the child's oral communication and public speaking, while solidifying knowledge gained through exploration and play.



Figure 3. Student demonstrating her technique to the group

Some of the most important skill development I observed related to cognitive development as discussed by Mainella and colleagues (2011). The children exhibited unrestricted creative freedom, turning a pile of sticks into a tiger pit one day, while the next time in the forest it was a campfire. Imaginations were constantly engaged as the children explored different elements within the forest. Finding different items, such as branches, leaves, and snail shells, sparked their creativity as they engaged in play with these items in small groups. Additionally, I observed their dexterity developing through this unrestricted outdoor play. In one instance, two students were packing snow on a tree and then using small twigs to draw and dig out the snow from the crevasses in the tree. I was told they were “getting the bugs off the tree” (Fig. 4).



Figure 4. Putting snow on a tree and using twigs to draw in the snow

The children of the forest school program had the freedom to explore different areas of the forest as long as they kept within the borders where one of the teachers could see them. Given this freedom, the children interacted with each other and the world around them, developing their conflict management and problem solving skills, turn-taking abilities, and cooperation skills. Alongside the cognitive and socio-emotional skills being cultivated, I witnessed many different physical abilities develop and grow in these students, including strength, balance, and endurance (Fig. 5).



Figure 5. Child exhibiting physical abilities through unstructured outdoor play

The growth of students' level of comfort in being outdoors was observable over the time spent I with them. Their understanding and appreciation of nature, their abilities to cooperate and accomplish goals as a group, and the creative ways in which they utilized nature's gifts for imaginative play and discovery also developed. All students wanted to participate and were more than willing to share with me what they had learned in the forest. Wirth and Rosenow (2012) discussed the connection between learning outdoors and developing a love of learning in itself. As a researcher and as a parent of a child in this forest school program, I saw this connection firsthand. Not only does my child appreciate nature and want to be outdoors as much as possible, she is always keen to learn new things and possesses the skills to figure out how she can go about learning what she is interested in. She is equipped with confidence, curiosity, a thirst for knowledge, and the perseverance to try different things to acquire that knowledge.

### **The Film: *Learning In Nature***

This film visually documents my observations while researching the forest school program and interacting with the students. I compiled images and a several video clips into an audiovisual montage, organizing the skills and abilities I witnessed while students engaged with each other and different materials in the forest. These skills and abilities included group participation, imagination, creativity, cooperation, cognitive development through exploration and discovery, enriched perspective towards nature, and physical abilities, such as balance, dexterity, and fine motor skills.

Put to music, this 7-minute film sums up observational and interview data acquired over the course of 5 months of field research. Words on paper can only say so much. The images in this video illustrate the positive emotions of these children in nature, highlighting the enjoyment each child felt as they learned outdoors through discovery and exploration. By connecting with nature through participating in unstructured outdoor play, the whole child is developed in a positive way, equipping children with the skills necessary for success and wellbeing within society. To watch *Learning In Nature*, visit <https://www.youtube.com/watch?v=QVvITE8tryo>.

### **References**

- Active Healthy Kids Canada. (2014). *2014 Active Healthy Kids Canada report card on physical activity for children and youth*. Retrieved from [http://dvqdas9jty7g6.cloudfront.net/reportcard2014/AHKC\\_2014\\_ReportCard\\_Short\\_EN\\_G.pdf](http://dvqdas9jty7g6.cloudfront.net/reportcard2014/AHKC_2014_ReportCard_Short_EN_G.pdf)
- Mainella, F. P., Agate, J. R., & Clark, B. S. (2011). Outdoor-based play and reconnection to nature: A neglected pathway to positive youth development. *New Directions for Youth Development*, 2011(130), 89-104.
- Wirth, S., & Rosenow, N. (2012). Supporting whole-child learning in nature-filled outdoor classrooms. *Young Children*, 67(1), 42-48.